

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



Company Information

Company Name: **Apache Corporation**

Gas STAR Contact: **C.J. Doiron**

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Company Information Updated: **Yes**

Activities Reported

BMP1: No BMP2: No BMP3: Yes

Total Methane Emission Reductions Reported This Year: **574,040**

Previous Years' Activities Reported: **No**

Period Covered by Report

From: **01/01/2010**

To: **12/31/2010**

☒ I hereby certify the accuracy of the data contained in this report.

Additional Comments

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BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Permian region

B. Description of PRO

Please specify the technology or practice that was implemented:

Artificial lift: install plunger lifts (10 years)

Please describe how your company implemented this PRO:

Install plunger lift systems to improve operational efficiencies and eliminate venting from lower pressure wells

C. Level of Implementation

Number of units installed: 6 units

D. Methane Emissions Reduction

Methane Emissions Reduction: **500 Mcf/year**

Basis for the emissions reduction estimate: **Other**

Calculated by field personnel based upon previous well unloading volumes.

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year

☒ Multi-year

If Multi-year:

- ☒ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): **\$ 225,000**

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 2,000**

\$ / Mcf used: **\$ 4.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **We will continue this PRO when plunger lift installation improves operational efficiency, reduces well**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

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BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Gulf of Mexico Shelf and Permian regions

B. Description of PRO

Please specify the technology or practice that was implemented:

Convert gas pneumatic controls to instrument air (10 years)

Please describe how your company implemented this PRO:

Convert instrument gas systems to compressed air to reduce atmospheric venting of gas, improve safety and increase operational efficiency.

C. Level of Implementation

Number of units installed: 6 units

D. Methane Emissions Reduction

Methane Emissions Reduction: 17,000 Mcf/year

Basis for the emissions reduction estimate: Calculation using manufacturer specifications

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year

☒ Multi-year

If Multi-year:

- ☒ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): **\$ 300,000**

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 68,000**

\$ / Mcf used: **\$ 4.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **Conversions will be done whenever project is practical and economic.**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

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BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Central and Permian regions

B. Description of PRO

Please specify the technology or practice that was implemented:

Eliminate unnecessary equipment and/or systems

Please describe how your company implemented this PRO:

Optimize compression assets by releasing 24 rental compressor units and switching production to low/mid pressure pipelines.

C. Level of Implementation

Other: Improved compression utilization and switch to low and mid pressure pipelines allowed release of 24 rental compression unit

D. Methane Emissions Reduction

Methane Emissions Reduction: **4,540 Mcf/year**

Basis for the emissions reduction estimate: **Other**

2% of total natural gas fuel savings that result from combustion and fugitives/venting

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

☒ One-year

☐ Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): **\$ 800,000**

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 18,160**

\$ / Mcf used: **\$ 4.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **Will continue to release rental compression whenever conditions warrant.**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

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BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Central and Permian regions

B. Description of PRO

Please specify the technology or practice that was implemented:

Install vapor recovery units (VRUs) (10 years)

Please describe how your company implemented this PRO:

Installation of 22 rental flash gas compressor units to collect gas for compression and sales.

C. Level of Implementation

Number of units installed: 22 units

D. Methane Emissions Reduction

Methane Emissions Reduction: **529,000 Mcf/year**

Basis for the emissions reduction estimate: **Calculation using manufacturer specifications**

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year ☒ Multi-year

If Multi-year:

- ☒ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): **\$ 600,000**

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 2,116,000**

\$ / Mcf used: **\$ 4.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **We will continue to add flash gas compression/vapor recovery whenever production conditions**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reduction in Economies (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

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BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Gulf Coast Onshore region

B. Description of PRO

Please specify the technology or practice that was implemented:

Install/convert gas-driven pumps to electric, mechanical, or solar pumps (10 years)

Please describe how your company implemented this PRO:

Replaced gas-driven chemical injection pumps with electrics to increase efficiency and reduce CO2e

C. Level of Implementation

Number of units installed: 3 units

D. Methane Emissions Reduction

Methane Emissions Reduction: **3,000 Mcf/year**

Basis for the emissions reduction estimate: **Calculation using manufacturer specifications**

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year

☒ Multi-year

If Multi-year:

- ☒ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): **\$ 60,000**

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 12,000**

\$ / Mcf used: **\$ 4.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **We will continue to replace gas-driven equipment when practical and economic.**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

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BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Gulf Coast Onshore and Permian regions

B. Description of PRO

Please specify the technology or practice that was implemented:

Reroute dehy./tank vents to flare or station suction (10 years)

Please describe how your company implemented this PRO:

Glycol still column, tank, glycol flashtank vapors, upsets and blowdowns routed to reboiler burner, to flare or to compression and sales.

C. Level of Implementation

Number of units installed: 4 units

D. Methane Emissions Reduction

Methane Emissions Reduction: **20,000 Mcf/year**

Basis for the emissions reduction estimate: **Other**

Engineering estimate prepared by production operations.

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year ☒ Multi-year

If Multi-year:

- ☒ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): **\$ 270,000**

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 80,000**

\$ / Mcf used: **\$ 4.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: _____

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

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Additional Accomplishments